

REMARKS/ARGUMENTS

Reconsideration of the application as amended is respectfully requested.

Status of Claims

Claims 1-3 and 5-9 are pending, with Claim 1 being the only independent claim. Claims 1-3 and 5-9 have been amended. Claim 4 has been canceled, without prejudice.

Overview of the Office Action

Claims 1-3 and 5-8 stand rejected under 35 U.S.C. § 112, second paragraph, because of the expression "an orifice" in Claim 1 and because the expression "the slot" in Claim 5 lacks antecedent basis.

Claims 1, 2, 4-6 and 8 stand rejected under 35 U.S.C. § 102(b) as anticipated by published U.S. Patent Application, Publication No. US 2002/0117265 (*Mayet '265*).

Claims 1, 2 and 6-8 stand rejected under 35 U.S.C. § 102(b) as anticipated by published U.S. Patent Application, Publication No. US 2001/0023736 (*Mayet '736*).

The Examiner did not reject Claims 3 and 9 over the applied references.

Amendment Addressing Section 112 and Formalities

Claim 1 has been amended to change the expression "an orifice" to "a slot on said at least one main arm" to be consistent with the original disclosure of the application, and to provide antecedent basis for the expression "said slot" in Claim 5.

In view of this modification, withdrawal of the rejection of Claims 1-3 and 5-8 under §112, second paragraph, is respectfully requested.

Summary of Subject Matter Disclosed in the Specification

The following descriptive details are based on the specification. They are provided only for the convenience of the Examiner as part of the discussion presented herein, and are not intended to argue limitations which are unclaimed.

One embodiment of the present application relates to a device for fabricating a tire reinforcement. The device comprises an actuation mechanism employing only three arms, namely, a main arm 31, a front auxiliary arm 32 and a rear auxiliary arm 33. A cord laying element, such as an eyelet 6, is mounted on one end of the main arm. *See Fig. 1.*

One end of the front and rear auxiliary arms is rotatably connected to a carriage 30, thereby rendering the auxiliary arms to be rotatable about respective geometrical rotation axes. The respective geometrical axes of the front and rear auxiliary arms are essentially parallel to and spaced from each other. *See Fig. 1.*

The other end of the front auxiliary arm is rotatably connected to the middle portion of the main arm. The other end of the rear auxiliary arm is rotatably and slidably connected to the other end (i.e. opposite to the end on which the eyelet is mounted) of the main arm via a slot-cam follower connection. *See Fig. 1.*

This mechanism has the advantage of being able to bring the eyelet 6 very close to a core 1 without employing a third auxiliary arm and, therefore, without having to control the movement of the third auxiliary arm. *See paragraph [0021].*

Furthermore, with this mechanism, the front and rear auxiliary arms can have different lengths and/or different oscillation amplitudes, which allows orientation of the main arm, during its movement, not to remain the same. This in turn allows the eyelet 6 to approach the bead of

the tire even in the case when the fabrication form is narrower at the level of the tire bead than half-way up the sidewall. *See* paragraph [0025]; Fig. 2.

Descriptive Summary of the Prior Art

Mayet '265

Mayet '265 discloses an actuation mechanism. In one embodiment of *Mayet '265*, the actuation mechanism employs just one auxiliary arm to guide a main arm. Another auxiliary arm is suspended from the main arm and supports a cord laying element at its lower end. *See* Fig. 7.

Mayet '736

Mayet '736 discloses an actuation mechanism that employs three auxiliary arms. Two auxiliary arms guide a main arm, which in turn supports a third auxiliary arm. A cord laying element is mounted on the outer end of the third auxiliary arm. *See* Fig. 1.

Arguments

Claim 1

Applicant respectfully submits that Claim 1, as amended, is not anticipated by *Mayet '265* or *Mayet '736* because neither *Mayet '265* nor *Mayet '736* discloses, either expressly or inherently, each and every element as set forth in Claim 1.

In particular, in *Mayet '265*, the rotation axis of the articulation between a main arm 31^{2a}, 31^{2b} and a first auxiliary arm 32^{2a}, 32^{2b} is coaxial with the geometrical rotation axis 32R^{2a}, 32R^{2b} of the first auxiliary arm. *See* Paragraphs [0067] and [0072]; Figs. 7 and 10. In contrast, in amended Claim 1, the rotation axis of the articulation between the main arm and the first

auxiliary arm is spaced from the geometrical rotation axis on which the first auxiliary arm is articulated.

In addition, in *Mayet '265*, the main arm 31^{2a}, 31^{2b} is only guided by a second auxiliary arm 3D^{2a}, 3D^{2b}. The first auxiliary arm 32^{2a}, 32^{2b} does not guide the main arm 31^{2a}, 31^{2b} because the first auxiliary arm is suspended from the main arm and supports a cord laying element 6^{2a}, 6^{2b} at its lower end. *See* Figs. 7 and 10. In contrast, in amended Claim 1, the main arm is guided by both the first auxiliary arm and the second auxiliary arm.

Moreover, in *Mayet '265*, the main arm 31^{2a}, 31^{2b} is not guided by the second auxiliary arm 3D^{2a}, 3D^{2b} via a slot-cam follower connection as recited in present Claim 1. More specifically, in Fig. 7 of *Mayet '265*, a slot 33^{2a} is formed on a disc 330^{2a}, and a cam follower 34^{2a} is mounted on a shoe 35^{2a}, which in turn is slidably borne by the main arm and connected to the first auxiliary arm via a connection 369^{2a}. *See* paragraph [0067]; Fig. 7. In Fig. 10 of *Mayet '265*, the main arm is mounted in a passage 3D1^{2b} formed in the second auxiliary arm, and is immobilized with respect to the second auxiliary arm by means of an end plate 3D2^{2b}. *See* paragraph [0073]; Fig. 10. In contrast, in amended Claim 1, the slot is on the main arm, and the cam follower is on the second auxiliary arm and slidably engages the slot.

In view of these differences, withdrawal of the § 102(b) rejection of Claim 1 as anticipated by *Mayet '265* is respectfully requested.

With respect to *Mayet '736*, the Examiner relied on Fig. 6 thereof as anticipating the claimed invention. However, it appears that the Examiner misinterpreted Fig. 6. Fig. 6 shows a variant of a first embodiment of a device for fabricating a tire reinforcement. *See* paragraph [0023]. The variant, however, relates to a mechanism for control of the movement of a third auxiliary arm 33^{1c}. *See* paragraph [0065]. The first embodiment is shown in Fig. 1. Thus, arm

33^{1c} in Fig. 6 corresponds to the third auxiliary arm 33^{1a} in Fig. 1. Arm 32^{1c} in Fig. 6 corresponds to the main arm 32^{1a} in Fig. 1. Arm 31^{1c} in Fig. 6 corresponds to the auxiliary arm 31^{1a} in Fig. 1.

The movement control mechanism comprises (1) a toothed wheel 322^{1c} mounted on the third auxiliary arm 33^{1c}, (2) a cam 381^{1c} formed on the auxiliary arm 31^{1c}, (3) a cam follower 382^{1c} mounted on one end of a connecting rod 383^{1c} and engaging the cam 381^{1c}, and (4) a guide 384^{1c} mounted on the main arm 32^{1c}. The connecting rod 383^{1c} slides in the guide 384^{1c}. A rack 385^{1c} is attached to the other end of the connecting rod 383^{1c} and engages the toothed wheel 322^{1c}. *See* paragraph [0066]; Fig. 6.

If the Examiner considers arm 32^{1c} to be the main arm, and arms 33^{1c} and 31^{1c} to be the first and second auxiliary arms, then in *Mayet '736* the slot is not on the main arm, and the cam follower is not on the second auxiliary arm, as recited in present Claim 1.

If the Examiner considers the connecting rod 383^{1c} to be a main arm, and arms 33^{1c} and 31^{1c} to be the first and second auxiliary arms, then again the slot is not on the main arm, and the cam follower is not on the second auxiliary arm, as recited in Claim 1.

Furthermore, in both situations, the first auxiliary arm of *Mayet '736* does not have a geometrical rotation axis spaced from a rotation axis forming an articulation between the main arm and the first auxiliary arm, as recited in Claim 1. More particularly, as clearly shown in Fig. 6, with arm 32^{1c} as the main arm, the main arm has a geometrical rotation axis which is coaxial with the rotation axis 33R1^{1c} between the main arm and the arm 33^{1c}. With connecting rod 383^{1c} as main arm, there is no rotation axis at all between arm 33^{1c} and the connecting rod 383^{1c} because arm 33^{1c} is coupled to the connecting rod 383^{1c} via a rack-toothed wheel arrangement.

In contrast, in amended Claim 1, the slot is on the main arm, and the cam follower is on the second auxiliary arm. In addition, the first auxiliary arm has a geometrical rotation axis as well as a rotation axis (i.e. the main arm is mounted on the first auxiliary arm via this rotation axis which forms an articulation between the two) which is parallel to and spaced from the geometrical rotation axis.

In view of these differences, withdrawal of the §102(b) rejection of Claim 1 as anticipated by *Mayet '736* is respectfully requested.

Moreover, the fundamental differences discussed above between the present invention and *Mayet '265* and/or *Mayet '736* render the invention clearly unobvious thereover.

Dependent Claims 2-3 and 5-9

Claims 2-3 and 5-9 depend, either directly or indirectly, from Claim 1 and, thus, each is allowable therewith.

In addition, Claims 2-3 and 5-9 include features which serve to even more clearly distinguish the present invention over the applied references.

Conclusion

Based on all of the above, it is respectfully submitted that the present application is now in proper condition for allowance. Prompt and favorable action to this effect and early passing of this application to issue are respectfully solicited.

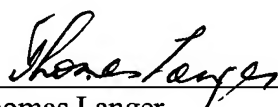
Should the Examiner have any comments, questions, suggestions or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate reaching a resolution of any outstanding issues.

Appl. No. 10/725,884
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It is believed that no further fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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